IN THE CLAIMS:

Substitute the following claims for the currently pending claims:

1-15. (canceled)

16. (currently amended) A method of selectively blocking or delaying a ~~downhold~~ downhole event, the method comprising the steps of;

connecting a housing containing a piston in such a manner that completion of said downhole event is dependent on said piston arriving at a given location within said housing;

disposing a magnetorheological fluid within said housing in such a manner that said piston is ~~blocked~~ impeded from moving toward said given location; and

creating a magnetic field through at least a portion of said magnetorheological fluid, ~~wherein said creating step creates a~~ the magnetic field being of sufficient magnitude to slow, but not stop, movement of said piston through said magnetorheological fluid.

17-55. (canceled)

56. (currently amended) A system for ~~drilling or producing oil and gas~~ controlling operation of at least one well tool, the system comprising:

a string ~~of tools~~ including the well tool deployed in a borehole;

a housing of the well tool, the housing containing a ~~first~~ piston;

a magnetorheological fluid disposed within said housing; and

a magnetic assembly ~~having~~ including a working gap having a first magnetic field strength , and a reluctance gap having a second magnetic field strength capable of switchably changing said first magnetic field strength , ~~and~~ said second magnetic field strength passing through said housing~~.~~ ,

wherein blockage of ~~the~~ a flow of magnetorheological fluid through said housing by said first magnetic field strength impedes movement of said piston.

57. (previously presented) The system of claim 56, wherein total blockage of said flow stops movement of said piston.

58. (previously presented) The system of claim 56, wherein partial blockage of said flow slows movement of said piston.

59. (currently amended) The system of claim 56, wherein said magnetic assembly comprises a permanent magnet and an electromagnet , and wherein ~~the un-powered state of said magnetic assembly generates~~ said first magnetic field strength and said second magnetic field strength result from a lack of current in said electromagnet.

60. (currently amended) The system of claim 56, wherein said magnetic assembly comprises an electromagnet , and wherein ~~the powered state of said magnetic assembly generates~~ said first magnetic field strength and said second magnetic field strength result from a current in said electromagnet.

61. (currently amended) The system of claim 56, wherein said piston is held immobile by ~~an unpowered~~ a lack of current in said magnetic assembly, thereby providing a safety lock.

62. (currently amended) A fluid control device used in a borehole, the device comprising:

a housing containing a ~~first~~ piston;

a magnetorheological fluid disposed within said housing; and

a magnetic assembly capable of switchably creating a magnetic field which passes through said housing~~;~~ ,

wherein said magnetic field is switchably created by a selected one of a short circuit ~~or~~ and an open circuit~~;~~ , and

wherein blockage of ~~the~~ a flow of magnetorheological fluid through said housing by ~~a~~ said magnetic field impedes movement of said piston.

63. (previously presented) The device of claim 62, wherein said open circuit is created by a hydraulic pressure.

64. (previously presented) The device of claim 62, wherein said open circuit is created by a mechanical force.

65. (previously presented) The device of claim 62, wherein said short circuit is created by a hydraulic pressure.

66. (previously presented) The device of claim 62, wherein said short circuit is created by a mechanical force.

67. (previously presented) The device of claim 62, wherein total blockage of said flow stops movement of said piston.

68. (previously presented) The device of claim 62, wherein partial blockage of said flow slows movement of said piston.

69. (currently amended) The device of claim 62, wherein said magnetic assembly comprises a permanent magnet , and wherein ~~the un-powered state of~~ a lack of current in said magnetic assembly generates ~~a~~ said magnetic field.

70. (currently amended) The device of claim 62, wherein said piston is held immobile by ~~an unpowered~~ a lack of current in said magnetic assembly, thereby providing a safety lock.

71. (previously presented) The device of claim 62, wherein movement of said piston is controlled to provide a time-delay device.

72. (new) A well tool, comprising:

a magnetorheological fluid; and

a magnetic assembly for producing a magnetic field in the magnetorheological fluid, the magnetic field having a strength level at which the magnetic field impedes, but does not completely stop, flow of the magnetorheological fluid, thereby delaying operation of the well tool.

73. (new) The well tool of claim 72, wherein the well tool is a firing head.

74. (new) The well tool of claim 72, wherein the well tool is connected to a perforating gun.

75. (new) The well tool of claim 72, wherein the magnetic field has an altered strength level at which the magnetic field completely stops flow of the magnetorheological fluid.

76. (new) The well tool of claim 75, wherein the altered strength level is produced by current in an electromagnet of the magnetic assembly.

77. (new) The well tool of claim 75, wherein the altered strength level is produced by a lack of current in an electromagnet of the magnetic assembly.

78. (new) The well tool of claim 75, wherein the altered strength level is produced by displacement of a portion of a magnetic circuit of the magnetic assembly.

79. (new) The well tool of claim 75, wherein the altered strength level is produced by transfer of the magnetic field relative to a reluctance gap.

80. (new) The well tool of claim 72, wherein the magnetic field has an altered strength level at which the magnetic field does not impede flow of the magnetorheological fluid.

81. (new) The well tool of claim 80, wherein the altered strength level is produced by current in an electromagnet of the magnetic assembly.

82. (new) The well tool of claim 80, wherein the altered strength level is produced by a lack of current in an electromagnet of the magnetic assembly.

83. (new) The well tool of claim 80, wherein the altered strength level is produced by displacement of a portion of a magnetic circuit of the magnetic assembly.

84. (new) The well tool of claim 80, wherein the altered strength level is produced by transfer of the magnetic field relative to a reluctance gap.

85. (new) A device for controlling a magnetic field applied to a magnetorheological fluid, the device comprising:

a magnetic assembly including a permanent magnet, an electromagnet, and a magnetic circuit; and

a passageway, the magnetic field being operative to impede flow of the magnetorheological fluid through the passageway when the magnetic circuit extends through the magnetorheological fluid.

86. (new) The device of claim 85, wherein the device is part of a well tool.

87. (new) The device of claim 85, wherein the passageway is positioned between opposite poles of the permanent magnet.

88. (new) The device of claim 85, wherein the permanent magnet is shaped so that opposite poles of the permanent magnet are positioned on respective opposite lateral sides of the passageway, thereby causing the magnetic circuit to extend through the passageway between the poles.

89. (new) The device of claim 85, wherein the permanent magnet has an elongated body extending between opposite poles of the permanent magnet, and wherein the electromagnet is formed by a coil encircling the permanent magnet body between the opposite poles.

90. (new) The device of claim 85, wherein the magnetic assembly includes a working gap and a reluctance gap, the passageway being positioned in the working gap, and wherein the electromagnet is operative to transfer the magnetic field between the working and reluctance gaps.

91. (new) A valve, comprising:

a magnetic assembly including an electromagnet; and

a magnetorheological fluid, flow of the magnetorheological fluid being increasingly impeded in response to a decrease of current in the electromagnet.

92. (new) The valve of claim 91, wherein the valve is part of a well tool.

93. (new) The valve of claim 91, wherein the magnetorheological fluid is positioned between opposite poles of a permanent magnet.

94. (new) The valve of claim 93, wherein the permanent magnet is shaped so that the opposite poles of the permanent

magnet are positioned on respective opposite lateral sides of a passageway containing the magnetorheological fluid, thereby causing a magnetic circuit to extend through the passageway between the poles.

95. (new) The valve of claim 93, wherein the permanent magnet has an elongated body extending between the opposite poles of the permanent magnet, and wherein the electromagnet is formed by a coil encircling the permanent magnet body between the opposite poles.

96. (new) The valve of claim 91, wherein the magnetic assembly includes a working gap and a reluctance gap, the magnetorheological fluid being positioned in the working gap, and wherein the electromagnet is operative to transfer a magnetic field between the working and reluctance gaps.

97. (new) A firing head for use in a well, the firing head comprising:

a magnetic assembly;

a magnetorheological fluid; and

a firing piston, the firing piston being prevented from displacing when the magnetic assembly applies a magnetic field having a strength level to the magnetorheological fluid.

98. (new) The firing head of claim 97, wherein the firing head is connected to a perforating gun.

99. (new) The firing head of claim 97, wherein the magnetic field has an altered strength level at which the magnetic field impedes, but does not completely stop, flow of the magnetorheological fluid, thereby slowing displacement of the firing piston.

100. (new) The firing head of claim 99, wherein the altered strength level is produced by current in an electromagnet of the magnetic assembly.

101. (new) The firing head of claim 99, wherein the altered strength level is produced by a lack of current in an electromagnet of the magnetic assembly.

102. (new) The firing head of claim 99, wherein the altered strength level is produced by displacement of a portion of a magnetic circuit of the magnetic assembly.

103. (new) The firing head of claim 99, wherein the altered strength level is produced by transfer of the magnetic field relative to a reluctance gap.

104. (new) The firing head of claim 97, wherein the magnetic field has an altered strength level at which the magnetic field does not impede flow of the magnetorheological fluid, thereby permitting displacement of the firing piston.

105. (new) The firing head of claim 104, wherein the altered strength level is produced by current in an electromagnet of the magnetic assembly.

106. (new) The firing head of claim 104, wherein the altered strength level is produced by a lack of current in an electromagnet of the magnetic assembly.

107. (new) The firing head of claim 104, wherein the altered strength level is produced by displacement of a portion of a magnetic circuit of the magnetic assembly.

108. (new) The firing head of claim 104, wherein the altered strength level is produced by transfer of the magnetic field relative to a reluctance gap.

109. (new) The firing head of claim 97, wherein a decrease in the magnetic field strength level applied to the magnetorheological fluid permits a valve to open, thereby applying increased pressure to the firing piston.

110. (new) The firing head of claim 97, wherein a decrease in the magnetic field strength level applied to the magnetorheological fluid releases the firing piston from a restraint, thereby permitting the firing piston to displace.

111. (new) The firing head of claim 97, wherein a decrease in the magnetic field strength level permits the firing piston to displace, thereby firing the firing head.